



*****IMPORTANT INFORMATION*****

2004 PUBLIC HEALTH ADVISORY #050

**TO: EMERGENCY ROOMS, INFECTION CONTROL PRACTITIONERS,
PUBLIC HEALTH NURSES, AND BUREAU OF HEALTH/DDC**

FROM: DORA ANNE MILLS, M.D., M.P.H., STATE HEALTH OFFICER

**SUBJECT: OUTBREAK OF PERTUSSIS CASES AT A SOUTHERN MAINE
HIGH SCHOOL**

DATE: MAY 13, 2004

TIME:

PAGES: 5

Urgent

Review X

Comment

Reply

Recycle

Confidentiality Notice: This fax message is intended for the exclusive use of the individual or entity identified above. It may contain information, which is privileged and/or confidential under both state and federal law. If you are not notified otherwise, any further dissemination, copying, or disclosure of the communication is strictly prohibited. If you have received this transmittal in error, please immediately notify us at 287-8478 and return the original transmission to us by mail at Key Bank Plaza, 8th Floor-286 Water Street, Augusta, ME 04333 without making a copy. Your cooperation in protecting confidential information is greatly appreciated.

TO: EMERGENCY ROOMS, INFECTION CONTROL PRACTITIONERS,
PUBLIC HEALTH NURSES AND BUREAU OF HEALTH/DDC

FROM: DORA ANNE MILLS, M.D., M.P.H., STATE HEALTH OFFICER

DATE: MAY 13, 2004

Outbreak of Pertussis Cases at a Southern Maine High School

Summary: The Bureau of Health is currently investigating an outbreak of pertussis at Cheverus High School, an institution in Portland which enrolls students from across southern and midcoastal Maine. Bureau epidemiologists are working with the school administration and nursing staff to ensure that close contacts of cases are referred for appropriate antibiotic prophylaxis and that individuals with clinical illnesses compatible with pertussis are referred for diagnostic testing and antibiotic treatment. Student families and staff members have received advisories instructing them to contact their primary care medical providers if they are symptomatic or are close contacts of confirmed cases. This advisory is intended to alert area clinicians who may see such patients and to provide an update on current recommendations in evaluation and preventive management of pertussis. If you are involved in evaluation or treatment of suspect pertussis cases or their exposed contacts, please review this advisory and contact the Division of Disease Control at 1-800-821-5821.

Background: The incidence of pertussis cases among middle school and high school age individuals in Maine began increasing significantly last summer, and clusters and outbreaks of the illness are continuing to occur through the present time. Similar increases are also being seen nationally. Older children and adolescents are becoming susceptible to pertussis as vaccine-acquired immunity from childhood vaccination begins to wane significantly in the 5 to 10 year period after the last scheduled pertussis immunizations are given. At this time there are no available pertussis vaccines approved for use in persons older than age 7.

Public Health Concerns: Pertussis very rarely causes severe or life-threatening illnesses in older children and adults, but the symptoms may cause significant discomfort and disability that persists for many weeks. More importantly, exposures from persons with unrecognized or untreated infections continue a chain of transmission that may result in cases of illness among those at highest risk of severe disease: infants under the age of one year (and especially those 6 months of age or less). Infants who acquire pertussis usually require hospitalization, and may develop life-threatening complications including pneumonia, seizures, encephalopathy, and malnutrition.

Clinical Presentation of Pertussis in Adolescents and Adults: After an incubation period that averages 7-10 days (range: 4 to 21 days, and occasionally longer), most individuals develop coryza (runny nose, sneezing, low-grade fever, mild cough) that lasts for 1-2 weeks. The cough then worsens, and often includes paroxysmal bursts and post-tussive vomiting. Inspiratory whoops may also occur (though are by no means universal), as a result of involuntary inhalation following severe coughing.

paroxysms. This paroxysmal stage lasts from 1-10 weeks, and is followed by gradual convalescence. Persons with pertussis are most infectious during the earliest phase of coryzal illness, and continue to transmit for 3 weeks or more after the onset of cough.

Objectives of Pertussis Treatment and Prophylaxis: Pertussis treatment has two objectives:

1) to decrease the severity of illness in persons who start treatment during the early stages of illness

2) to clear *B. pertussis* from the respiratory secretions of infected persons, so that transmission can be interrupted.

The objective of antibiotic prophylaxis of exposed close contacts is to prevent clinical illness and the potential for further transmission by clearing *B. pertussis* from the nasopharynx.

Recommendations:

1. Reporting: Report suspected cases promptly to the Bureau of Health's 24 hour disease reporting and consultation line at 1-800-821-5821.
2. Diagnostic Testing: Persons who exhibit symptoms consistent with pertussis, whether exposed to a known case or not, should be tested for pertussis with a nasopharyngeal swab or aspirate specimen. Bacterial culture is the gold standard of pertussis diagnosis and testing is available through the Maine Health and Environmental Testing Laboratory (HETL). Area hospital laboratories are supplied with diagnostic kits from HETL. Polymerase Chain Reaction (PCR) testing may also be available through commercial laboratories. If you have any questions about specimen collection methods or need materials please call (800) 867-4775 during business hours or 758-0935 (pager) after hours and on holidays/weekends.
3. Antibiotic Treatment: Individuals with suspected pertussis should be treated with one of the appropriate antibiotics and should not attend school (or work or daycare) until they complete the fifth day of medication. A fact sheet on antibiotic management with appropriate medications is attached. Please speak with a program epidemiologist (1-800-821-5821) for detailed guidance.
4. Close Contacts: Persons who are identified as close contacts during an outbreak investigation will be given a fact sheet and referred to their medical providers for antibiotic prophylaxis (see attached fact sheet on antibiotic use). ***Asymptomatic contacts do not need to be tested for pertussis.*** Asymptomatic contacts may return to work or school, but are advised to remain home through the first 5 days of antibiotic use if they become symptomatic with respiratory symptoms.

5. Exposed infants and young children: Exposed infants and children under age 7 should be brought up to date on their pertussis vaccination schedule. Call (800) 867-4775 if you have any immunization-related questions.
6. More Information: For more pertussis information, treatment, and control measures, please go to: www.cdc.gov/health/pertussis.htm

Please share with appropriate clinical staff members at your facility*

NOTE: See treatment and prophylaxis measures below.

Antimicrobial Treatment and Prophylaxis for Pertussis

1. Because it has been successful in rapidly clearing *B. pertussis* from the nasopharynx, erythromycin has been the antimicrobial agent of choice for pertussis prophylaxis and treatment. Trimethoprim-sulfamethoxazole is a reasonable alternative. Azithromycin (Zithromax) or clarithromycin (Biaxin) may also be effective, though there is limited in-vivo data on their use in this setting.
2. The antibiotic dosages and treatment duration used for chemoprophylaxis of contacts are the same as those recommended for treatment of clinical cases.

Erythromycin

The recommended dose of erythromycin for use against pertussis in children is 40 to 50 mg/kg per day and in adults 1 to 2 gm/day orally in 4 divided doses for 14 days (maximum 2 gm/day).

Trimethoprim-sulfamethoxazole (TMP-SMZ)

The recommended dosage for children is trimethoprim 8 mg/kg/day, sulfamethoxazole 40 mg/kg/day in two divided doses for 14 days.

The recommended dosage for adults is trimethoprim 320 mg/day, sulfamethoxazole 1600 mg/day in two divided doses for 14 days.

Azithromycin and clarithromycin

For patients in whom tolerance and/or compliance issues with erythromycin treatment are deemed likely, one of the following may be considered :

Azithromycin : 10-12 mg/kg per day orally in one dose (maximum 500 mg/day) for 5-7 days. (note: in adults and older children, use of a standard “Z-Pak” - 500 mg on day 1, and 250 mg. qd for 4 days – is acceptable)

Clarithromycin: 15-20 mg/kg/day orally in two divided doses (maximum 1 gm/day), for 10-14 days).

Note: Please contact the Bureau of Health at (800) 821-5821 if you have any questions about pertussis treatment and prevention issues.